Release notes for ENDF/B Development n-035_Br_081 evaluation

April 26, 2017

- `checkr` Warnings:

    1. A previous error halted parsing of the current section
       MAT=3531, MF= 1, MT=451 (1): Parsing stopped

       ```
       ERROR(S) FOUND IN MAT=3531, MF= 1, MT=451
           SECTION CANNOT BE CHECKED FROM SEQUENCE NUMBER      294 TO      378
       ```

- `checkr` Errors:

    1. A variable is outside the allowed ENDF range
       MAT=3531, MF= 1, MT=451 (0): Variable range

       ```
       ERROR(S) FOUND IN MAT=3531, MF= 1, MT=451
           MOD =     1 OUT OF RANGE     0 -     0            RECORD NUMBER     294
       ```

    2. Missing a section in directory so your directory is messed up. This error will break everything else
       MAT=3531, MF= 2, MT=151 (0): Directory (b)

       ```
       ERROR(S) FOUND IN MAT=3531, MF= 2, MT=151
           SECTION  2/151 NOT IN DIRECTORY                RECORD NUMBER     380
       ```

    3. Missing a section in directory so your directory is messed up. This error will break everything else
       MAT=3531, MF= 3, MT= 1 (0): Directory (b)

       ```
       ERROR(S) FOUND IN MAT=3531, MF= 3, MT=  1
           SECTION  3/  1 NOT IN DIRECTORY                RECORD NUMBER     745
       ```

    4. Missing a section in directory so your directory is messed up. This error will break everything else
       MAT=3531, MF= 3, MT= 2 (0): Directory (b)

       ```
       ERROR(S) FOUND IN MAT=3531, MF= 3, MT=  2
           SECTION  3/  2 NOT IN DIRECTORY                RECORD NUMBER     776
       ```

    5. Missing a section in directory so your directory is messed up. This error will break everything else
       MAT=3531, MF= 3, MT= 4 (0): Directory (b)

       ```
       ERROR(S) FOUND IN MAT=3531, MF= 3, MT=  4
           SECTION  3/  4 NOT IN DIRECTORY                RECORD NUMBER     807
       ```

    6. Missing a section in directory so your directory is messed up. This error will break everything else
       MAT=3531, MF= 3, MT= 16 (0): Directory (b)

       ```
       ERROR(S) FOUND IN MAT=3531, MF= 3, MT= 16
           SECTION  3/ 16 NOT IN DIRECTORY                RECORD NUMBER     828
       ```

    7. Missing a section in directory so your directory is messed up. This error will break everything else
       MAT=3531, MF= 3, MT= 17 (0): Directory (b)

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```
ERROR(S) FOUND IN MAT=3531, MF= 3, MT= 17
     SECTION  3/ 17 NOT IN DIRECTORY              RECORD NUMBER     838
```

8. Missing a section in directory so your directory is messed up. This error will break everything else
   MAT=3531, MF= 3, MT= 22 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=3531, MF= 3, MT= 22
     SECTION  3/ 22 NOT IN DIRECTORY              RECORD NUMBER     843
```

9. Missing a section in directory so your directory is messed up. This error will break everything else
   MAT=3531, MF= 3, MT= 28 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=3531, MF= 3, MT= 28
     SECTION  3/ 28 NOT IN DIRECTORY              RECORD NUMBER     855
```

10. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=3531, MF= 3, MT= 32 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=3531, MF= 3, MT= 32
     SECTION  3/ 32 NOT IN DIRECTORY              RECORD NUMBER     867
```

11. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=3531, MF= 3, MT= 33 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=3531, MF= 3, MT= 33
     SECTION  3/ 33 NOT IN DIRECTORY              RECORD NUMBER     874
```

12. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=3531, MF= 3, MT= 51 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=3531, MF= 3, MT= 51
     SECTION  3/ 51 NOT IN DIRECTORY              RECORD NUMBER     880
```

13. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=3531, MF= 3, MT= 52 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=3531, MF= 3, MT= 52
     SECTION  3/ 52 NOT IN DIRECTORY              RECORD NUMBER     901
```

14. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=3531, MF= 3, MT= 53 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=3531, MF= 3, MT= 53
     SECTION  3/ 53 NOT IN DIRECTORY              RECORD NUMBER     921
```

15. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=3531, MF= 3, MT= 54 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=3531, MF= 3, MT= 54
          SECTION  3/ 54 NOT IN DIRECTORY                RECORD NUMBER    941
```

16. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=3531, MF= 3, MT= 55 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=3531, MF= 3, MT= 55
          SECTION  3/ 55 NOT IN DIRECTORY                RECORD NUMBER    961
```

17. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=3531, MF= 3, MT= 56 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=3531, MF= 3, MT= 56
          SECTION  3/ 56 NOT IN DIRECTORY                RECORD NUMBER    980
```

18. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=3531, MF= 3, MT= 57 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=3531, MF= 3, MT= 57
          SECTION  3/ 57 NOT IN DIRECTORY                RECORD NUMBER    999
```

19. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=3531, MF= 3, MT= 58 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=3531, MF= 3, MT= 58
          SECTION  3/ 58 NOT IN DIRECTORY                RECORD NUMBER   1017
```

20. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=3531, MF= 3, MT= 59 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=3531, MF= 3, MT= 59
          SECTION  3/ 59 NOT IN DIRECTORY                RECORD NUMBER   1035
```

21. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=3531, MF= 3, MT= 60 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=3531, MF= 3, MT= 60
          SECTION  3/ 60 NOT IN DIRECTORY                RECORD NUMBER   1052
```

22. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=3531, MF= 3, MT= 61 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=3531, MF= 3, MT= 61
          SECTION  3/ 61 NOT IN DIRECTORY                RECORD NUMBER   1069
```

23. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=3531, MF= 3, MT= 62 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=3531, MF= 3, MT= 62
          SECTION  3/ 62 NOT IN DIRECTORY                RECORD NUMBER    1086
```

24. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=3531, MF= 3, MT= 63 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=3531, MF= 3, MT= 63
          SECTION  3/ 63 NOT IN DIRECTORY                RECORD NUMBER    1102
```

25. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=3531, MF= 3, MT= 64 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=3531, MF= 3, MT= 64
          SECTION  3/ 64 NOT IN DIRECTORY                RECORD NUMBER    1117
```

26. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=3531, MF= 3, MT= 65 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=3531, MF= 3, MT= 65
          SECTION  3/ 65 NOT IN DIRECTORY                RECORD NUMBER    1132
```

27. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=3531, MF= 3, MT= 66 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=3531, MF= 3, MT= 66
          SECTION  3/ 66 NOT IN DIRECTORY                RECORD NUMBER    1146
```

28. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=3531, MF= 3, MT= 67 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=3531, MF= 3, MT= 67
          SECTION  3/ 67 NOT IN DIRECTORY                RECORD NUMBER    1160
```

29. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=3531, MF= 3, MT= 68 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=3531, MF= 3, MT= 68
          SECTION  3/ 68 NOT IN DIRECTORY                RECORD NUMBER    1174
```

30. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=3531, MF= 3, MT= 69 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=3531, MF= 3, MT= 69
          SECTION  3/ 69 NOT IN DIRECTORY                RECORD NUMBER    1187
```

31. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=3531, MF= 3, MT= 70 (0): Directory (b)

```
    ERROR(S) FOUND IN MAT=3531, MF= 3, MT= 70
        SECTION  3/ 70 NOT IN DIRECTORY                    RECORD NUMBER    1200
```

32. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=3531, MF= 3, MT= 71 (0): Directory (b)

```
    ERROR(S) FOUND IN MAT=3531, MF= 3, MT= 71
        SECTION  3/ 71 NOT IN DIRECTORY                    RECORD NUMBER    1212
```

33. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=3531, MF= 3, MT= 72 (0): Directory (b)

```
    ERROR(S) FOUND IN MAT=3531, MF= 3, MT= 72
        SECTION  3/ 72 NOT IN DIRECTORY                    RECORD NUMBER    1224
```

34. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=3531, MF= 3, MT= 73 (0): Directory (b)

```
    ERROR(S) FOUND IN MAT=3531, MF= 3, MT= 73
        SECTION  3/ 73 NOT IN DIRECTORY                    RECORD NUMBER    1235
```

35. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=3531, MF= 3, MT= 74 (0): Directory (b)

```
    ERROR(S) FOUND IN MAT=3531, MF= 3, MT= 74
        SECTION  3/ 74 NOT IN DIRECTORY                    RECORD NUMBER    1246
```

36. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=3531, MF= 3, MT= 75 (0): Directory (b)

```
    ERROR(S) FOUND IN MAT=3531, MF= 3, MT= 75
        SECTION  3/ 75 NOT IN DIRECTORY                    RECORD NUMBER    1256
```

37. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=3531, MF= 3, MT= 76 (0): Directory (b)

```
    ERROR(S) FOUND IN MAT=3531, MF= 3, MT= 76
        SECTION  3/ 76 NOT IN DIRECTORY                    RECORD NUMBER    1266
```

38. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=3531, MF= 3, MT= 91 (0): Directory (b)

```
    ERROR(S) FOUND IN MAT=3531, MF= 3, MT= 91
        SECTION  3/ 91 NOT IN DIRECTORY                    RECORD NUMBER    1276
```

39. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=3531, MF= 3, MT=102 (0): Directory (b)

```
     ERROR(S) FOUND IN MAT=3531, MF= 3, MT=102
         SECTION  3/102 NOT IN DIRECTORY                RECORD NUMBER    1285
```

40. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=3531, MF= 3, MT=103 (0): Directory (b)

```
     ERROR(S) FOUND IN MAT=3531, MF= 3, MT=103
         SECTION  3/103 NOT IN DIRECTORY                RECORD NUMBER    1311
```

41. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=3531, MF= 3, MT=104 (0): Directory (b)

```
     ERROR(S) FOUND IN MAT=3531, MF= 3, MT=104
         SECTION  3/104 NOT IN DIRECTORY                RECORD NUMBER    1326
```

42. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=3531, MF= 3, MT=105 (0): Directory (b)

```
     ERROR(S) FOUND IN MAT=3531, MF= 3, MT=105
         SECTION  3/105 NOT IN DIRECTORY                RECORD NUMBER    1339
```

43. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=3531, MF= 3, MT=107 (0): Directory (b)

```
     ERROR(S) FOUND IN MAT=3531, MF= 3, MT=107
         SECTION  3/107 NOT IN DIRECTORY                RECORD NUMBER    1350
```

44. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=3531, MF= 4, MT= 2 (0): Directory (b)

```
     ERROR(S) FOUND IN MAT=3531, MF= 4, MT=  2
         SECTION  4/  2 NOT IN DIRECTORY                RECORD NUMBER    1367
```

45. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=3531, MF= 4, MT= 16 (0): Directory (b)

```
     ERROR(S) FOUND IN MAT=3531, MF= 4, MT= 16
         SECTION  4/ 16 NOT IN DIRECTORY                RECORD NUMBER    1579
```

46. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=3531, MF= 4, MT= 17 (0): Directory (b)

```
     ERROR(S) FOUND IN MAT=3531, MF= 4, MT= 17
         SECTION  4/ 17 NOT IN DIRECTORY                RECORD NUMBER    1590
```

47. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=3531, MF= 4, MT= 22 (0): Directory (b)

```
     ERROR(S) FOUND IN MAT=3531, MF= 4, MT= 22
        SECTION  4/ 22 NOT IN DIRECTORY                    RECORD NUMBER    1601
```

48. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=3531, MF= 4, MT= 28 (0): Directory (b)

```
     ERROR(S) FOUND IN MAT=3531, MF= 4, MT= 28
        SECTION  4/ 28 NOT IN DIRECTORY                    RECORD NUMBER    1612
```

49. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=3531, MF= 4, MT= 32 (0): Directory (b)

```
     ERROR(S) FOUND IN MAT=3531, MF= 4, MT= 32
        SECTION  4/ 32 NOT IN DIRECTORY                    RECORD NUMBER    1623
```

50. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=3531, MF= 4, MT= 33 (0): Directory (b)

```
     ERROR(S) FOUND IN MAT=3531, MF= 4, MT= 33
        SECTION  4/ 33 NOT IN DIRECTORY                    RECORD NUMBER    1634
```

51. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=3531, MF= 4, MT= 51 (0): Directory (b)

```
     ERROR(S) FOUND IN MAT=3531, MF= 4, MT= 51
        SECTION  4/ 51 NOT IN DIRECTORY                    RECORD NUMBER    1645
```

52. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=3531, MF= 4, MT= 52 (0): Directory (b)

```
     ERROR(S) FOUND IN MAT=3531, MF= 4, MT= 52
        SECTION  4/ 52 NOT IN DIRECTORY                    RECORD NUMBER    1673
```

53. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=3531, MF= 4, MT= 53 (0): Directory (b)

```
     ERROR(S) FOUND IN MAT=3531, MF= 4, MT= 53
        SECTION  4/ 53 NOT IN DIRECTORY                    RECORD NUMBER    1700
```

54. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=3531, MF= 4, MT= 54 (0): Directory (b)

```
     ERROR(S) FOUND IN MAT=3531, MF= 4, MT= 54
        SECTION  4/ 54 NOT IN DIRECTORY                    RECORD NUMBER    1727
```

55. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=3531, MF= 4, MT= 55 (0): Directory (b)

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```
      ERROR(S) FOUND IN MAT=3531, MF= 4, MT= 55
         SECTION  4/ 55 NOT IN DIRECTORY                RECORD NUMBER    1754
```

56. Missing a section in directory so your directory is messed up. This error will break everything else
   MAT=3531, MF= 4, MT= 56 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=3531, MF= 4, MT= 56
         SECTION  4/ 56 NOT IN DIRECTORY                RECORD NUMBER    1781
```

57. Missing a section in directory so your directory is messed up. This error will break everything else
   MAT=3531, MF= 4, MT= 57 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=3531, MF= 4, MT= 57
         SECTION  4/ 57 NOT IN DIRECTORY                RECORD NUMBER    1808
```

58. Missing a section in directory so your directory is messed up. This error will break everything else
   MAT=3531, MF= 4, MT= 58 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=3531, MF= 4, MT= 58
         SECTION  4/ 58 NOT IN DIRECTORY                RECORD NUMBER    1835
```

59. Missing a section in directory so your directory is messed up. This error will break everything else
   MAT=3531, MF= 4, MT= 59 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=3531, MF= 4, MT= 59
         SECTION  4/ 59 NOT IN DIRECTORY                RECORD NUMBER    1862
```

60. Missing a section in directory so your directory is messed up. This error will break everything else
   MAT=3531, MF= 4, MT= 60 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=3531, MF= 4, MT= 60
         SECTION  4/ 60 NOT IN DIRECTORY                RECORD NUMBER    1889
```

61. Missing a section in directory so your directory is messed up. This error will break everything else
   MAT=3531, MF= 4, MT= 61 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=3531, MF= 4, MT= 61
         SECTION  4/ 61 NOT IN DIRECTORY                RECORD NUMBER    1916
```

62. Missing a section in directory so your directory is messed up. This error will break everything else
   MAT=3531, MF= 4, MT= 62 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=3531, MF= 4, MT= 62
         SECTION  4/ 62 NOT IN DIRECTORY                RECORD NUMBER    1943
```

63. Missing a section in directory so your directory is messed up. This error will break everything else
   MAT=3531, MF= 4, MT= 63 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=3531, MF= 4, MT= 63
         SECTION  4/ 63 NOT IN DIRECTORY                    RECORD NUMBER    1968
```

64. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=3531, MF= 4, MT= 64 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=3531, MF= 4, MT= 64
         SECTION  4/ 64 NOT IN DIRECTORY                    RECORD NUMBER    1993
```

65. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=3531, MF= 4, MT= 65 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=3531, MF= 4, MT= 65
         SECTION  4/ 65 NOT IN DIRECTORY                    RECORD NUMBER    2018
```

66. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=3531, MF= 4, MT= 66 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=3531, MF= 4, MT= 66
         SECTION  4/ 66 NOT IN DIRECTORY                    RECORD NUMBER    2043
```

67. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=3531, MF= 4, MT= 67 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=3531, MF= 4, MT= 67
         SECTION  4/ 67 NOT IN DIRECTORY                    RECORD NUMBER    2068
```

68. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=3531, MF= 4, MT= 68 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=3531, MF= 4, MT= 68
         SECTION  4/ 68 NOT IN DIRECTORY                    RECORD NUMBER    2093
```

69. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=3531, MF= 4, MT= 69 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=3531, MF= 4, MT= 69
         SECTION  4/ 69 NOT IN DIRECTORY                    RECORD NUMBER    2118
```

70. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=3531, MF= 4, MT= 70 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=3531, MF= 4, MT= 70
         SECTION  4/ 70 NOT IN DIRECTORY                    RECORD NUMBER    2143
```

71. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=3531, MF= 4, MT= 71 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=3531, MF= 4, MT= 71
          SECTION  4/ 71 NOT IN DIRECTORY                 RECORD NUMBER    2168
```

72. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=3531, MF= 4, MT= 72 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=3531, MF= 4, MT= 72
          SECTION  4/ 72 NOT IN DIRECTORY                 RECORD NUMBER    2193
```

73. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=3531, MF= 4, MT= 73 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=3531, MF= 4, MT= 73
          SECTION  4/ 73 NOT IN DIRECTORY                 RECORD NUMBER    2218
```

74. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=3531, MF= 4, MT= 74 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=3531, MF= 4, MT= 74
          SECTION  4/ 74 NOT IN DIRECTORY                 RECORD NUMBER    2243
```

75. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=3531, MF= 4, MT= 75 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=3531, MF= 4, MT= 75
          SECTION  4/ 75 NOT IN DIRECTORY                 RECORD NUMBER    2268
```

76. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=3531, MF= 4, MT= 76 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=3531, MF= 4, MT= 76
          SECTION  4/ 76 NOT IN DIRECTORY                 RECORD NUMBER    2293
```

77. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=3531, MF= 4, MT= 91 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=3531, MF= 4, MT= 91
          SECTION  4/ 91 NOT IN DIRECTORY                 RECORD NUMBER    2318
```

78. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=3531, MF= 5, MT= 16 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=3531, MF= 5, MT= 16
          SECTION  5/ 16 NOT IN DIRECTORY                 RECORD NUMBER    2345
```

79. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=3531, MF= 5, MT= 17 (0): Directory (b)

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```
        ERROR(S) FOUND IN MAT=3531, MF= 5, MT= 17
            SECTION  5/ 17 NOT IN DIRECTORY                RECORD NUMBER    2393
```

80. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=3531, MF= 5, MT= 22 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=3531, MF= 5, MT= 22
            SECTION  5/ 22 NOT IN DIRECTORY                RECORD NUMBER    2410
```

81. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=3531, MF= 5, MT= 28 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=3531, MF= 5, MT= 28
            SECTION  5/ 28 NOT IN DIRECTORY                RECORD NUMBER    2543
```

82. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=3531, MF= 5, MT= 32 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=3531, MF= 5, MT= 32
            SECTION  5/ 32 NOT IN DIRECTORY                RECORD NUMBER    2643
```

83. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=3531, MF= 5, MT= 33 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=3531, MF= 5, MT= 33
            SECTION  5/ 33 NOT IN DIRECTORY                RECORD NUMBER    2679
```

84. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=3531, MF= 5, MT= 91 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=3531, MF= 5, MT= 91
            SECTION  5/ 91 NOT IN DIRECTORY                RECORD NUMBER    2708
```

- `psyche` Warnings:

  1. Non-threshold reaction with Q value differing from PSYCHE's expectations
     FILE 3 / SECTION 107 / THE CALCULATED Q 3.81904E+05 DISSAGREES WITH THE GIVEN Q 4.18215E+05 (0): Iffy Q

```
        FILE  3
          SECTION 107
                  THE CALCULATED Q  3.81904E+05 DISSAGREES WITH THE GIVEN Q  4.18215E+05
```

- `recent` Warnings:

  1. Statistical weight of certain L values were incorrect
     0: RRR goof (a)

```
         Calculate Cross Sections from Resonance Parameters (RECENT 2015-1)
         ==============================================================================
         Retrieval Criteria-----------        MAT
         File 2 Mimimum Cross Section- 1.0000E-10 (Standard Option)
         Reactions with No Background-    Output (Resonance Contribution)
         ... [656 more lines]
```

- fudge-4.0 Warnings:

  1. Missing a channel with a particular angular momenta combination
     resonances / resolved (Error # 1): missingResonanceChannel

     ```
     WARNING: Missing a channel with angular momenta combination L = 0, J = 0.0 and S = 0.0 for "capture"
     WARNING: Missing a channel with angular momenta combination L = 1, J = 1.0 and S = 0.0 for "capture"
     WARNING: Missing a channel with angular momenta combination L = 1, J = 1.0 and S = 1.0 for "capture"
     WARNING: Missing a channel with angular momenta combination L = 1, J = 2.0 and S = 1.0 for "capture"
     ```

  2. Cross section does not match sum of linked reaction cross sections
     crossSectionSum label 0: total (Error # 0): CS Sum.

     ```
     WARNING: Cross section does not match sum of linked reaction cross sections! Max diff: 0.20%
     ```

  3. Cross section does not match sum of linked reaction cross sections
     crossSectionSum label 1: (z,n) (Error # 0): CS Sum.

     ```
     WARNING: Cross section does not match sum of linked reaction cross sections! Max diff: 0.11%
     ```

- fudge-4.0 Errors:

  1. The spin statistical weights are off, indicating missing channels
     resonances / resolved / MultiLevel_BreitWigner (Error # 0): badSpinStatisticalWeights

     ```
     WARNING: The spin statical weights for L=1 sums to 2.0, but should sum to 3.0.  You have too few channels for re
     ```

  2. Calculated and tabulated Q values disagree.
     reaction label 28: n[multiplicity:'2'] + Br80 (Error # 0): Q mismatch

     ```
     WARNING: Calculated and tabulated Q-values disagree: -10138635.67140198 eV vs -1.01611e7 eV!
     ```

  3. Calculated and tabulated Q values disagree.
     reaction label 29: n[multiplicity:'3'] + Br79 (Error # 0): Q mismatch

     ```
     WARNING: Calculated and tabulated Q-values disagree: -18030911.56156921 eV vs -1.80582e7 eV!
     ```

  4. Calculated and tabulated Q values disagree.
     reaction label 30: n + H1 + Se80 (Error # 0): Q mismatch

     ```
     WARNING: Calculated and tabulated Q-values disagree: -7485825.698913574 eV vs -7508340. eV!
     ```

  5. Calculated and tabulated Q values disagree.
     reaction label 31: n + H2 + Se79 (Error # 0): Q mismatch

     ```
     WARNING: Calculated and tabulated Q-values disagree: -15174911.10391235 eV vs -1.5115e7 eV!
     ```

  6. Calculated and tabulated Q values disagree.
     reaction label 32: n + H3 + Se78 (Error # 0): Q mismatch

```
WARNING: Calculated and tabulated Q-values disagree: -15880510.22488403 eV vs -1.58951e7 eV!
```

7. Calculated and tabulated Q values disagree.
   reaction label 33: Br82 + gamma (Error # 0): Q mismatch

```
WARNING: Calculated and tabulated Q-values disagree: 7610991.293029785 eV vs 7593420. eV!
```

8. Calculated and tabulated Q values disagree.
   reaction label 34: n + He4 + As77 (Error # 0): Q mismatch

```
WARNING: Calculated and tabulated Q-values disagree: -6465129.062042236 eV vs -6482190. eV!
```

9. Calculated and tabulated Q values disagree.
   reaction label 35: H1 + Se81_s (Error # 0): Q mismatch

```
WARNING: Calculated and tabulated Q-values disagree: -784925.1058654785 eV vs -802533. eV!
```

10. Calculated and tabulated Q values disagree.
    reaction label 36: H2 + Se80_s (Error # 0): Q mismatch

```
WARNING: Calculated and tabulated Q-values disagree: -5261259.597976685 eV vs -5198220. eV!
```

11. Calculated and tabulated Q values disagree.
    reaction label 37: H3 + Se79_s (Error # 0): Q mismatch

```
WARNING: Calculated and tabulated Q-values disagree: -8917678.163299561 eV vs -8929860. eV!
```

12. Calculated and tabulated Q values disagree.
    reaction label 38: He4 + As78_s (Error # 0): Q mismatch

```
WARNING: Calculated and tabulated Q-values disagree: 507030.0494384766 eV vs 418215. eV!
```

- `njoy2012` Warnings:

  1. With the advent of the ENDF-6 format, it is possible to make evaluations that fully describe all the products of a nuclear reaction. Some carry-over evaluations from earlier ENDF/B versions also have this capability, but many do not. This message is intended to goad evaluators to improve things!
     groupr...compute self-shielded group-averaged cross-sections (0): GROUPR/conver (0)

```
     ---message from conver---cannot do complete particle production for mt= 16
                         only mf4/mf5 provided
```

  2. With the advent of the ENDF-6 format, it is possible to make evaluations that fully describe all the products of a nuclear reaction. Some carry-over evaluations from earlier ENDF/B versions also have this capability, but many do not. This message is intended to goad evaluators to improve things!
     groupr...compute self-shielded group-averaged cross-sections (1): GROUPR/conver (0)

```
     ---message from conver---cannot do complete particle production for mt= 17
                         only mf4/mf5 provided
```

  3. With the advent of the ENDF-6 format, it is possible to make evaluations that fully describe all the products of a nuclear reaction. Some carry-over evaluations from earlier ENDF/B versions also have this capability, but many do not. This message is intended to goad evaluators to improve things!
     groupr...compute self-shielded group-averaged cross-sections (2): GROUPR/conver (0)

```
---message from conver---cannot do complete particle production for mt= 22
                         only mf4/mf5 provided
```

4. With the advent of the ENDF-6 format, it is possible to make evaluations that fully describe all the products of a nuclear reaction. Some carry-over evaluations from earlier ENDF/B versions also have this capability, but many do not. This message is intended to goad evaluators to improve things!
   groupr...compute self-shielded group-averaged cross-sections (3): GROUPR/conver (0)

```
---message from conver---cannot do complete particle production for mt= 28
                         only mf4/mf5 provided
```

5. With the advent of the ENDF-6 format, it is possible to make evaluations that fully describe all the products of a nuclear reaction. Some carry-over evaluations from earlier ENDF/B versions also have this capability, but many do not. This message is intended to goad evaluators to improve things!
   groupr...compute self-shielded group-averaged cross-sections (4): GROUPR/conver (0)

```
---message from conver---cannot do complete particle production for mt= 32
                         only mf4/mf5 provided
```

6. With the advent of the ENDF-6 format, it is possible to make evaluations that fully describe all the products of a nuclear reaction. Some carry-over evaluations from earlier ENDF/B versions also have this capability, but many do not. This message is intended to goad evaluators to improve things!
   groupr...compute self-shielded group-averaged cross-sections (5): GROUPR/conver (0)

```
---message from conver---cannot do complete particle production for mt= 33
                         only mf4/mf5 provided
```

7. With the advent of the ENDF-6 format, it is possible to make evaluations that fully describe all the products of a nuclear reaction. Some carry-over evaluations from earlier ENDF/B versions also have this capability, but many do not. This message is intended to goad evaluators to improve things!
   groupr...compute self-shielded group-averaged cross-sections (6): GROUPR/conver (0)

```
---message from conver---cannot do complete particle production for mt= 91
                         only mf4/mf5 provided
```

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